

## Fragile Giants: a Natural History of the Loess Hills

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## Book Reviews

*Fragile Giants: A Natural History of the Loess Hills*, by Cornelia F. Mutel. Iowa City: University of Iowa Press, 1989. 284 pp. Illustrations, maps, tables, bibliography, index. \$16.95 paper.

REVIEWED BY WILLIAM M. JOHNSON, STATE HISTORICAL SOCIETY OF IOWA

*Fragile Giants* is a thoughtful stroll over the hills of western Iowa as they respond to time and changes in the climate and inhabitants. The book invites the reader to visit the Loess Hills to view their unique features and life-forms. Cornelia F. Mutel has combined the natural and human history of the Loess Hills into a readable and informative work for the lay person. Those with backgrounds in science or other special interests may expect more than this work offers, but it is addressed primarily to those who have yet to learn about and thus to appreciate this region.

The Loess Hills stretch along the western boundary of Iowa from Sioux City south into Missouri. They are the legacy of the great ice sheets that swept over the northern Great Plains during the Pleistocene epoch (2.5 million to 10,000 years ago). The moving ice reshaped the land, grinding great quantities of rock into dust that washed onto the plains as the ice melted. Wind, blowing much as it does today, raised large clouds of dust, carrying them eastward to be deposited on the eastern side of the Missouri River valley. Over the centuries these deposits grew into the Loess Hills of western Iowa.

Even while the formation process continued, the hills began to change. Erosion from water, wind, and gravity rounded the hills, shaping valleys and cliffs. The climate changed with time; periods of drought were followed by moist years. The plants and animals responded to the change. Over time a complex of small unique riches developed along the length and breadth of the hills, each preserving some remnant of a past environment. Across the moist southern hills, oak and hickory woodlands dominate the vegetation. In the valleys where water is plentiful, populations of box elder and cottonwood are prevalent. In the drier well-drained areas of the northern region and on the higher slopes and ridgetops, short prairie grasses dominate. In these areas scrub oak and shrubs compete for space with species of little blue stem and side oats grama. The driest western facing slopes

receive little moisture, creating an environment that sustains dryland species such as yucca and the ornate box turtle which are more common in the arid western prairies.

Human presence in the hills is seen in scattered archeological remains which document the animals hunted and the agriculture attempted. With the coming of European cultures, the hills began to change in response to the demands of the new inhabitants: prairie fires were stopped, pastures replaced prairie, and cultivation opened areas to erosion. Across the entire region, roads, agriculture, housing developments, and barrow pits became forces of change that continue to alter plant and animal communities.

To aid those who take her invitation to heart, Cornelia F. Mutel has provided a selection of short tours and checklists of plants and animals that will help expose the inquisitive to the variety of features and life-forms in the Loess Hills. Although illustrations are plentiful, many of the photographs are too small to show the desired features clearly. I also wish more color plates could have been scattered through the body of the text rather than added at the end.

*Fragile Giants* was partially funded by the Iowa Academy of Science and is a suitable companion to *Iowa's Natural Heritage*. It is not designed as a scientific text, nor does it provide great depth or new insight on any specific topic, but it will extend the general reader's view and understanding of one of Iowa's unique areas.

*Historians of the American Frontier: A Bio-Bibliographical Sourcebook*, edited by John R. Wunder. Westport, CT: Greenwood Press, 1988. xiii, 814 pp. Bibliographies, index. \$75.00 cloth.

REVIEWED BY ROGER L. NICHOLS, UNIVERSITY OF ARIZONA

For at least the past century historians have studied the American frontier. In this sourcebook John Wunder has gathered discussions of the life and work of fifty-seven people who wrote about some aspect of the frontier experience. A fair number of the individuals included were not historians, but, in the editor's view, their writings on the frontier deserved recognition. To be included the individual had to have died and to have made "significant discoveries that have shaped further research, writing, and thought" about the frontier experience (xi). Unfortunately, by excluding living scholars, major figures such as Vernon Carstensen, Paul Gates, and Earl Pomeroy are not included. Coordinating the work of more than fifty scholars took several years. During that time several important scholars who were living when the book began had died. A few would-be contributors never completed

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